

DOCUMENT RESUME

ED 377 880

IR 055 367

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TITLE Libraries and the Internet. ERIC Digest.
INSTITUTION ERIC Clearinghouse on Information and Technology,
Syracuse, NY.
SPONS AGENCY Office of Educational Research and Improvement (ED),
Washington, DC.
REPORT NO EDO-IR-94-6
PUB DATE Dec 94
CONTRACT RR93002009
NOTE 4p.
AVAILABLE FROM ERIC Clearinghouse on Information & Technology,
Syracuse University, 4-194 Center for Science &
Technology, Syracuse, NY 13244-4100 (free while
supply lasts).
PUB TYPE Information Analyses - ERIC Clearinghouse Products
(071)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Libraries; *Computer Networks; Electronic
Mail; Elementary Secondary Education; Futures (of
Society); Higher Education; Information Literacy;
Information Networks; Information Policy; Information
Technology; *Legislation; *Library Administration;
*Library Automation; Library Networks; *Library
Services; *Policy Formation; Public Libraries; School
Libraries; Special Libraries; State Federal Aid
IDENTIFIERS ERIC Digests; File Transfer Protocol; *Internet;
Telnet

ABSTRACT

The Internet is an international computer network encompassing thousands of smaller interconnected networks. This digest describes various uses of the Internet and its impact on libraries, as well as Internet-related library issues. The Internet applications of electronic mail (E-mail), telnet, and file transfer protocol (FTP) are briefly described. The impact of the Internet on libraries includes: leadership opportunities; cost and time savings; question answering services; international interlibrary loans; document delivery services; online transactions; government information; information sharing; and increased librarian visibility and value to the community. Internet-related issues are discussed with respect to academic, public, special, and school libraries. It is recommended that librarians take an active role in the formulation of national policy and legislation, creation and organization of services and resources, and be properly trained in network literacy in order to provide programs for patrons to become network literate. (Contains 9 references.) (MAS)

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by Mary McKenna

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ERIC DIGEST

December 1994

EDO-IR-94-6

Libraries and the Internet

by Mary McKenna

In his State of the Union Address in January 1994, President Clinton called for every library in America to be connected to the national information superhighway by the year 2000. This superhighway, the Internet, is an international computer network encompassing thousands of smaller interconnected networks. Various Internet applications for libraries, impacts of Internet connectivity, and recommendations for future library involvement are described in this Digest. The responsibility for program and policy support for universal connectivity needs to come from federal, state, and local governments, and from all who work within the library community.

Internet Applications for Libraries

Librarians use many Internet communications and service utilities. Some popular applications include:

- **Electronic mail (E-mail):** Librarians use E-mail to communicate with colleagues and customers. They participate in electronic discussion groups, share experiences and ideas with other librarians, and create and monitor discussion groups of interest to their customers.
- **Telnet:** Librarians use Telnet to connect to remote computer resources. They explore other library catalogs, access commercial and noncommercial database services, and share the resources of campus wide information systems and community Free-Nets.
- **File Transfer Protocol (FTP):** FTP enables librarians to obtain software programs, text, images, and sound files from the net and then offer them to their customers. Librarians and information professionals contribute to the Internet community by making library catalogs and local databases available on the network; creating Gopher sites that offer logical, well organized, menu-driven access to services and resources on the Internet; and establishing World Wide Web servers that provide graphical user interfaces for browsing the resources of the Internet.

Internet's Impact on Libraries

Internet services and resources influence library services. New opportunities and benefits include:

- **Leadership opportunities.** Libraries frequently take the lead by introducing the Internet to user communities in industry, academia, and K-12 schools, and often provide training and access for customers as budgets allow. Public libraries are beginning to offer similar services to the public at large.

- **Cost savings and time savings.** Listservs and other electronic forums facilitate information exchanges among librarians from all over the world. Librarians now keep up with advances, challenges, and issues without having to attend expensive conferences or subscribing to multiple library journals.
- **Question answering services.** AskERIC is a network-based education information service offering library media specialists (as well as K-12 teachers, administrators, parents, and students) access to a question answering service. Another service, Stumpers-L, provides a networking resource for reference questions.
- **International interlibrary loans.** Libraries now have customers from all over the world. Internet accessible library catalogs assist research endeavors, provide interlibrary loan verifications, and offer a myriad of reference materials that enhance local library collections.
- **Document delivery services.** There has been a rapid growth in fee-based document delivery services that use the network to order and/or transfer documents to libraries and often to end-users, bypassing libraries completely.
- **Online transactions.** Major bibliographic utilities are experimenting with the use of real time bibliographic transactions over the network, while already supporting batch mode transactions.
- **Government information.** Government information can be distributed over the network to libraries allowing unparalleled opportunities for libraries to inform communities and constituents about government issues.
- **Information sharing.** Technical standards, such as Z39.50, coordinate the transfer of information between different systems and formats over the network. These standards are essential to libraries as automated library systems share information and streamline processing using the Internet.
- **Other impacts.** Using Internet resources may include some increase in workload for librarians, but that is offset by the library's increased visibility and value to the community and the opportunity for the library to become an information provider rather than a dispensary.

Today's Issues

- **Academic libraries.** Academic libraries are on the leading edge of Internet developments because of the information resources they provide for research. Distance education degrees and library catalogs available on the Internet provide a global customer base

for academic libraries. Academic libraries often distribute academic authors' unpublished documents via the Internet allowing subject experts to be direct sources of information for the user. The roles and responsibilities of librarians, the library, campus computing services, campus administration, publishers, and vendors need redefinition in a networked environment.

- **Public libraries.** The public library community has been slow to connect to the Internet. Public libraries serving large communities, however, are more likely to have an Internet connection than those serving smaller communities. The cost of connectivity is the main barrier to a public library presence on the Internet. Public librarians consider federal government assistance essential for connection and equipment costs. Staff support, expertise, and training are other issues that need resolution to ensure Internet access for public libraries and their customers. Some suggestions for training include "post-MLS certification and sabbaticals for public librarians to be reeducated" (McClure, 1993).
- **Special libraries.** National Science Foundation policy on what constituted acceptable use of the network kept corporate libraries wary of connectivity in the late 1980s and early 1990s. With the arrival of network connectivity specifically for commercial customers and the enticement of lower cost connections to commercial database retrieval services, corporate libraries are becoming an active presence on the network.
- **School libraries.** School library media specialists for grades K-12 are working hard to bring the Internet into their schools. Resources they introduce include online catalogs, CD-ROM periodical indexes, full-text encyclopedias and reference resources, interactive multimedia, and other network technologies. Funding for equipment, infrastructure upgrades, and connectivity is often difficult to obtain, however, and educational goals must be coordinated. Working to coordinate existing school programs with Goals 2000 and National Research and Education Network (NREN) objectives is one challenge faced by media specialists and teachers.

Recommendations

Librarians and media specialists need to have a stake in the development of policies and roles as their communities adopt Internet technologies. They need to consider the following as they develop visions for implementing technology:

- Librarians need to take an active role during formulation of national policy and legislation to ensure that libraries receive adequate funding to be major players in the National Information Infrastructure (NII).
- Internet connectivity does not guarantee equitable access to the Internet. Librarians as a profession need to become network literate and in turn need to provide programs and facilities so their customers will become network literate.

- The services and resources of the Internet need to be created and organized by librarians. A catalog of network services and resources is essential for efficient use of the Internet.
- Library administrators need to include staff training and practice time in any budget for Internet connectivity.
- Librarians need to take an active role in new legislation being proposed concerning intellectual property and copyright in an electronic environment.
- Librarians need to have significant influence on the evolution of Internet services and need to be prepared to share their ideas with administrators and project planners.

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This publication was prepared with funding from the Office of Educational Research and Improvement, U.S. Department of Education, contract no. RR93002009. The opinions expressed in this report do not necessarily reflect the positions or policies of OERI or the Department of Education.